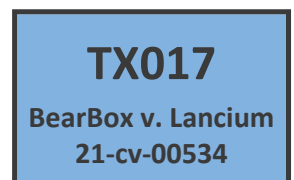# EXHIBIT 19

EXHIBIT H

TX017.0001

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
Claim 1	
A system comprising:	Layer1 has the claimed system: For example, "Layer 1 designs, produces, and operates its entire [Bitcoin] mining infrastructure, from proprietary ASIC chips and liquid-cooled mining container to wholly-owned power development and procurement." (*Ex. T, Layer1 2/19/2020*). "Layer1 builds turnkey, full-integrated Bitcoin mining data centers that boost profitability of energy assets and improve the reliability of electrical grids." *(Ex. J, Layer1.com 6/9/2020)*
[a1] a set of computing systems,	Layer1's system comprises a "set of computing systems": "Bitcoin miners are essentially the bookkeepers of the Bitcoin network, compiling transactions and adding them to 'blocks' of records published every 10 minutes. Miners earn the right to publish a block of transactions by being the first to solve a very hard, random mathematical equation known as a 'hash' or 'hashing puzzle.'" "When they win that computing race, miners are rewarded with a fixed amount of Bitcoin—currently 12.5 Bitcoin, or about \$125,000." "[M]ost mining these days is at industrial scale." (*Ex. T, 2/19/2020 Fortune*) Layer1 operates "two bitcoin factories – 20-by-8 shipping containers chock full of bitcoin miners … the mining machines are immersed in vats of liquid … that keeps them cool." (*Ex. E, 2/28/2020* Forbes). These mining machines are a set of computing systems.
[a2] wherein the set of computing systems is configured to perform computational operations using power from a power grid;	Layer1's set of computing systems is configured to perform computational operations using power from the grid. "Bitcoin miners are essentially the bookkeepers of the Bitcoin network, compiling transactions and adding them to 'blocks' of records published every 10 minutes. Miners earn the right to publish a block of transactions

1

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	by being the first to solve a very hard, random mathematical equation known as a 'hash' or 'hashing puzzle.'" "When they win that computing race, miners are rewarded with a fixed amount of Bitcoin—currently 12.5 Bitcoin, or about $125,000." "[M]ost mining these days is at industrial scale." (*Ex. T, 2/19/2020 Fortune*). Bitcoin mining involves performing computational operations as described above.
	Layer1's set of computing systems are configured to utilize power from a power grid. For example, Layer1's Bitcoin mining data centers have been "steadily mining Bitcoin at [its] large-scale power infrastructure property in West Texas" since early 2020. By centralizing the consumption and release of hundreds of Megawatts of electricity per site, each of our Bitcoin mining datacenters becomes a large-scale battery." (*Ex. J, Layer1.com, 6/9/2020*). Layer1 obtained the capital it needed to "acquire an entire electric substation capable of handling 100 megawatts, and 30 acres of land on which they aim to install a village consisting of dozens of their container-based bitcoin factories, each of which draws 2.5 mw (enough to power more than 1,000 homes)." (*Ex. E, Forbes, 2/28/2020*) Layer1's CEO (Alexander Liegl) admitted Layer1's computing systems perform computational operations using power from a power grid, stating: "… either you can get that electricity by collocating directly with energy plants or you can, as we're currently doing, buying it off the grid through our substation and then effectively you feed your electricity to your chips which do monotonous computation ..." Leslie Lamb, EP 9: YOUR LAYER1 "LIEGL" COUNSEL, ANCHOR FM (2020), https://anchor.fm/cryptounstacked/episodes/EP-9-Your-Layer1-Liegl-Counsel-eeuq3f (at 14:47 min) (last visited Aug 13, 2020). "Layer1's model also involves coordinating with the utilities supplying the electricity in a way that the startup says can stabilize power grids. The company pays for the electricity it needs." (*Ex. K, Business Insider 8/11/20*)

2

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
[b] a control system configured to:	Layer1's "system" includes a "control system." "Layer1 is the first company in the global Bitcoin mining industry that can curtail large amounts of energy consumption during times of market need and release it to the grid at the push of a button." (*Ex. L*, 5/22/2020 Layer1). "Layer1 has entered into so-called "demand response" contracts whereby at a minute's notice they will shut down all their machines and instead allow their 100 mw load to flow onto the grid." (*Ex. D, Forbes,* *5/21*/2020). "Through an instant software command, at the press of a button, [Layer1] can turn off dozens/hundreds of megawatts instantly. Ryan Selkis, LAYER 1 CEO ALEX LIEGL ON THE INSTITUTIONALIZATION OF MINING IN AMERICA, MESSARI.IO (2020), https://messari.io/article/layer-1-ceo-alex-liegl-on-the-institutionalization-of-mining-in-america (at 14:05 min) (last visited Aug 13, 2020). Layer1 has "**the capability to participate in demand response management just because of the unique software platform that we've built.**" Christine Kim, CRYPTO LONG AND SHORT: A NEW MARKET PART 3 WITH ALEXANDER LIEGL, FRANK HOLMES, ETHAN VERA COINDESK.COM (2020), https://www.coindesk.com/videos/coindesk-tv-consensus-distributed/crypto-long-and-short-a-new-market-part-three-with-alexander-liegl-frank-holmes-ethan-vera (at 4:35 min) (last visited Aug 13, 2020). Layer1's proprietary "demand-response" software can be activated to stabilize the energy grid by dynamically managing its [Layer1's] electricity usage during periods of peak market demand. (*Ex. L*, 5/22/2020 Layer1). The ability to shut down its Bitcoin mining machines "at a minute's notice" and "dynamically manage" its energy usage demonstrates that Layer1 utilizes a control system.
[b1] monitor a set of conditions;	Layer1's control system is configured to "monitor a set of conditions":

3

Layer1 Claim Chart
U.S. Patent No. 10,608,433

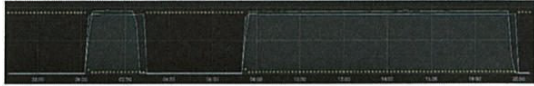| Exemplary Asserted Claims	Layer1's Infringement
	"Layer1 has entered into so-called "demand response" contracts whereby at a minute's notice they will shut down all their machines and instead allow their 100 mw load to flow onto the grid." (*Ex. D, Forbes, 5/21/*2020). Layer1's proprietary "demand-response" software can be activated to stabilize the energy grid by dynamically managing its [Layer1's] electricity usage during periods of peak market demand. (*Ex. L*, 5/22/2020 Layer1). Layer1 maintains that it "is the first company in the global Bitcoin mining industry that can curtail large amounts of energy consumption during times of market need and release it to the grid at the push of a button, …." (*Ex. L, PRNewswire, 5/22/2020*) Layer1's stated ability to "dynamically manage" its electricity usage during periods of peak market demand and release its energy load to the grid at the push of a button indicates the ability to monitor a set of conditions, such as the market demand for electricity, frequency of the grid, price of electricity, etc. Monitoring certain conditions such as hash rate, price, and power is part of Layer1's arbitrage software functionality. "There's a power arbitrage opportunity as well. In the summertime when air conditioners in Dallas, Houston and Austin are going full tilt, Texas electricity prices sometimes surge to nosebleed levels. When that happens, Layer1 will be able to make more money by shutting off its mining machines and allowing the power to flow through its substation to the grid. "'We can stabilize the grid by selling capacity for curtailment at the push of a button," says Liegl.'" (*Ex. E, Forbes, 2/28/2020*). "Bitcoin Mining Arbitrage Stack: 1) Fixed Price Power Contract; 2) Grid Congestion Hedge; 3) Forward Sell CLR Capacity; 4) Bitcoin Futures; 5) Hashrate Futures." (*Ex. M*, 8/3/2020 tweet). Layer1 monitors at least hash rate and price in conjunction with their arbitrage activities. *See, e.g.*, Christine Kim, CRYPTO LONG AND SHORT: A NEW MARKET PART 3 WITH ALEXANDER LIEGL, FRANK

4

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	HOLMES, ETHAN VERA COINDESK.COM (2020), https://www.coindesk.com/videos/coindesk-tv-consensus-distributed/crypto-long-and-short-a-new-market-part-three-with-alexander-liegl-frank-holmes-ethan-vera (at 2:00 min) (last visited Aug 13, 2020). "And since it's a refinery business you benefit from output multiplicity. Power, hashrate, bitcoin. Multi-variate capital allocation problem to create something scalable across those vectors." (*Ex. N*, 8/7/2020 tweet).
[b2(i)] receive power option data based, at least in part, on a power option agreement	Layer1's control system is configured to "receive power option data based, at least in part, on a power option agreement." Upon information and belief, the control system receives power option data from at least the Electric Reliability Council of Texas ("ERCOT"), which operates the electric grid and manages the deregulated market for 75 percent of the state. Alex Liegl stated: "… some entity like ERCOT can call on us and in the course of 5 minutes … through an instant software command at the press of a button we can turn off you know dozens/hundreds of megawatts instantly. So effectively, it's a big energy arbitrage play …" Ryan Selkis, LAYER 1 CEO ALEX LIEGL ON THE INSTITUTIONALIZATION OF MINING IN AMERICA, MESSARI.IO (2020), https://messari.io/article/layer-1-ceo-alex-liegl-on-the-institutionalization-of-mining-in-america (at 13:59 min) (last visited Aug 13, 2020). Upon information and belief, "Layer1 has entered into so-called "demand response" contracts whereby at a minute's notice they will shut down all their machines and instead allow their 100 mw load to flow onto the grid." (*Ex.* D, *Forbes, 5/21/2020*). Layer1's proprietary "demand-response" technology is "based on the energy market standards developed by the

5

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	Electric Reliability Council of Texas (ERCOT)." (*Ex. L, PRNewswire, 5/22/2020*). Layer1's CEO (Alex Liegl) notes that "[p]hysical power plants take days to turn on/off power and can only in-/decrease output in inefficient bulky increments (>1MW) … [v]irtual power plants instantly turn on/off power and can in-/decrease output in efficient hyper-granular increments (1kW) = 1000x improvement" (*Ex. O, 5/27/2020 tweet*). "Software command instantly decreases or increases many megawatts of electricity and #bitcoin hashrate to stabilize power grids:" (*Ex. G, 6/7/2020 tweet*). "L1 virtual power plant data centers [*i.e.*, Bitcoin mining facilities] shut down during peaks for a discounted overall $MWh power price." (*Ex. P, 6/8/2020 tweet*). Upon information and belief, Layer1's "demand-response" contracts are power option agreements (POA) and Layer1's system receives power option data (*e.g.*, minimum power threshold(s) associated with one or more time intervals for the load to operate at in accordance with/based on the POA, other constraints that its data centers should operate in accordance with, indications of a monetary penalty that would be imposed on the data centers for failure to operate as agreed upon in the POA, indications of a monetary benefit provided to the load operating at power consumption levels in accordance with the POA, one or more maximum power thresholds and corresponding time intervals for those thresholds, and/or the frequency at which the grid is operating) based, at least in part, on the power option agreement(s).

6

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	Layer1 has "the capability to participate in demand response management just because of the unique software platform that we've built." Christine Kim, CRYPTO LONG AND SHORT: A NEW MARKET PART 3 WITH ALEXANDER LIEGL, FRANK HOLMES, ETHAN VERA COINDESK.COM (2020), https://www.coindesk.com/videos/coindesk-tv-consensus-distributed/crypto-long-and-short-a-new-market-part-three-with-alexander-liegl-frank-holmes-ethan-vera (at 4:35 min) (last visited Aug 13, 2020). Upon information and belief, a system operating as a Controllable Load Resource (CLR) receives power option data as part of a power option agreement. Layer1's system is operating as a Controllable Load Resource (CLR) within the ERCOT market. (*Ex. F,* 8/1/2020 tweet).
[b2(ii)] wherein the power option data specify: (i) a set of minimum power thresholds and (ii) a set of time intervals,	*See* [b2(i)] above. Layer1's system is operating as a Controllable Load Resource (CLR) within the ERCOT market, (*Ex. F,* 8/1/2020 tweet), which, upon information and belief, requires, among other things, that Layer1 receive a set of minimum power thresholds (typically in MWs) for Layer1 data centers (the Load) to operate) over a set of time intervals (e.g., CLR base points every 5 minutes) with intermediate thresholds provided at, for example, 5 second intervals (e.g., CLR updated base points) to define the path for Layer1's data centers to ramp to the scheduled minimum power threshold. Upon information and belief, Layer1 has demonstrated its system's ability to receive and respond to power option data that includes a varying set of minimum power thresholds (in MW) corresponding to a set of time intervals (in seconds) through its substation.

7

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	  (*Ex. Q*, 6/17/2020 tweet). Upon information and belief, Layer1 also employed or employs other types of Load Response programs which also meet this limitation.
[b2(iii)] wherein each minimum power threshold in the set of minimum power thresholds is associated with a time interval in the set of time intervals;	*See* above.
[c1] responsive to receiving the power option data, determine a performance strategy for the set of computing systems based on a combination of at least a portion of the power option data and at least one condition in the set of conditions,	Layer1's control system is configured to be "responsive to receiving the power option data, determine a performance strategy for the set of computing systems based on a combination of at least a portion of the power option data and at least one condition in the set of conditions" Layer1's system employs bitcoin miners as computing systems. *See* "a set of computing systems" above. Upon information and belief, Layer1's system determines a performance strategy for their computing systems, including, for example, specifying operating modes, power on/off, and/or standby states for groups of miners in order to provide a granular response to meet the power option data power thresholds.

8

Layer1 Claim Chart
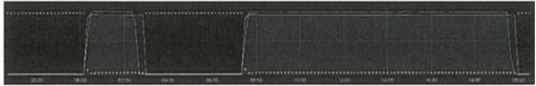**U.S. Patent No. 10,608,433**

Exemplary Asserted Claims	Layer1's Infringement
	Upon information and belief, in order to determine such a performance strategy, Layer1's system must necessarily monitor current conditions including, for example, operating modes, power on/off, and/or standby states of the computing systems. Upon information and belief, Layer1's systems also consider other conditions such as hash rate, price, and power. *See* "monitor a set of conditions" above.
	Layer1 states that their "[v]irtual power plants instantly turn on/off and can in-/decrease output in efficient hyper-granular increments (1kW) . . . ." (*Ex. O, 5/27/2020 Tweet*). More specifically, Layer1's "[b]itcoin mining provides granularity in demand-response that alternatives can not. Miners can be shut down in batches, providing the precise wattage the grid needs." (*Ex. R, Arvanaghi 6/10/2020 11:02AM Tweet*).
	Additionally, "Layer1 has entered into so-called "demand response" contracts whereby at a minute's notice they will shut down all their machines and instead allow their 100 mw load to flow onto the grid." (*Ex. D, Forbes, 5/21/2020*). Layer1's proprietary "demand-response" software can be activated to stabilize the energy grid by dynamically managing its [Layer1's] electricity usage during periods of peak market demand. (*Ex. L, 5/22/2020 Layer1*). "'If there is an insufficiency of supply we can shut down.' The best part, they get paid whether a grid emergency occurs or not. Just for their willingness to shut in Bitcoin production, Layer1 collects an annual premium equating to $19 per megawatthour of their expected power demand — or about $17 million." (*Ex. D, Forbes, 5/21/2020*).
	To accomplish the above functionality, Layer1, on information and belief, receives power option data (*e.g.*, one or more of at least the minimum power threshold(s) associated with one or more time intervals for the load to operate at in accordance with/based on the POA, other constraints that

9

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	its data centers should operate in accordance with, indications of a monetary penalty that would be imposed on the data centers for failure to operate as agreed upon in the POA, indications of a monetary benefit provided to the load operating at power consumption levels in accordance with the POA, one or more maximum power thresholds and corresponding time intervals for those thresholds, and/or the frequency at which the grid is operating) and determines a performance strategy based on a portion of the power option data and one or more conditions (*e.g.*, current, future, and past prices for power, power availability, current and/or predicted weather conditions, data center workloads, types of computing systems available within datacenters, price to obtain power at the data center, levels of power storage available and accessible at each data center, power availability (*e.g.*, power consumption ranges at a set of computing systems and/or one or more datacenters, determining source(s) of power available at a data center (BTM, grid, battery), power prices, computing system parameters, cryptocurrency prices, computational operational parameters, and/or current/predicted weather conditions).
[c2] wherein the performance strategy comprises a power consumption target for the set of computing systems for each time interval in the set of time intervals	Upon information and belief, Layer1's "performance strategy comprises a power consumption target for the set of computing systems for each time interval in the set of time intervals" Upon information and belief, Layer1 has demonstrated its system's ability to develop a performance strategy that includes power consumption targets for each interval in a varying set of minimum power thresholds (in MW) corresponding to a set of time intervals (in seconds).

10

Layer1 Claim Chart
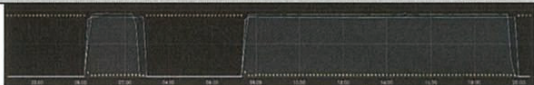**U.S. Patent No. 10,608,433**

Exemplary Asserted Claims	Layer1's Infringement
	  (*Ex. Q*, 6/17/2020 tweet). *See also* [b2(ii)] above. Upon information and belief, Layer1 also employed or employs other types of Load Response programs which also meet this limitation. Layer1's demand-response software "instantly decreases or increases many megawatts of electricity and #bitcoin hashrate to stabilize public power grids:" (*Ex. G, 6/7/2020 Tweet*). Upon information and belief, the above graph illustrates the ability to control the power consumption to a target point over time intervals. *See also Ex. Q, 6/17/2020 Tweet*) (showing Layer1's controlled power levels in one second intervals).
[c3] wherein each power consumption target is equal to or greater than the minimum power threshold associated with each time interval; and	Upon information and belief, as a Controllable Load Resource (CLR) within the ERCOT market, (*Ex. F*, 8/1/2020 tweet), Layer1's system controls Layer1's load such that the power consumption target for Layer1's computing load, for each associated time interval, equals the

11

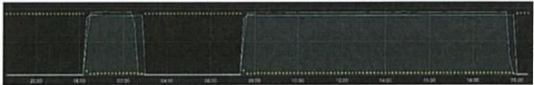## Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	base point and base point updates thresholds set by ERCOT. *See* [b(2)(iii) – c(2) above].
	Upon information and belief, Layer1 has demonstrated its system's ability to develop a performance strategy that includes power consumption targets for each interval in a varying set of minimum power thresholds (in MW) corresponding to a set of time intervals (in seconds).
	(*Ex. Q*, 6/17/2020 tweet). Additionally, upon information and belief, due to control lag, Layer1's power consumption target may necessarily be greater than the minimum power threshold as the system ramps down to meet a base point threshold. *See, e.g.,* graph above around and immediately preceding time 3:00.
	Upon information and belief, Layer1 also employed or employs other types of Load Response programs which also meet this limitation. Layer1's demand-response software "instantly decreases or increases many megawatts of electricity and #bitcoin hashrate to stabilize public power grids:"

12

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	  (*Ex. G, 6/7/2020 Tweet*). Upon information and belief, the above graph illustrates the ability to control the power consumption to a target point over time intervals. *See also Ex. Q, 6/17/2020 Tweet*) (showing Layer1's controlled power levels in one second intervals prior to their announcement as a CLR on July 31, 2020).
[d] provide instructions to the set of computing systems to perform one or more computational operations based on the performance strategy.	Layer1's control system is configured to "provide instructions to the set of computing systems to perform one or more computational operations based on the performance strategy." Upon information and belief, Layer1's control system can, based on the performance strategy discussed above, provide instructions to the set of computing systems, for example, to turn on and/or to enter a higher power state, and therefore perform on or more computational operations. Layer1 states that their "[v]irtual power plants instantly turn on/off and can in-/decrease output in efficient hyper-granular increments (1kW) . . . ." (*Ex. O, 5/27/2020 Tweet*). More specifically, Layer1's "[b]itcoin mining provides granularity in demand-response that alternatives cannot. Miners can be shut down in batches, providing the precise wattage the grid needs." (*Ex. R, Arvanaghi 6/10/2020 11:02AM Tweet*). Layer1 further states that it can "stabilize the grid by selling capacity for curtailment at the push of a button." (*Ex. E, Forbes 2/28/2020*). "Virtual power plants instantly turn on/off power and can in-/decrease output in efficient hyper-granular increments (1kW) = 1000x improvement." (*Ex. O, 5/27/2020 Tweet*). Layer1's "[s]oftware command' instantly decreases

13

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	or increases many megawatts of electricity and #bitcoin hashrate to stabilize public power grids:" (*Ex. G, 6/7/2020 Tweet*).
Claim 2	
The system of claim 1,	*See claim 1, preamble*
wherein the control system is configured to monitor the set of conditions comprising:	*See claim 1, elements [b] and [b1]*
[a] a price of power from the power grid; and	Upon information and brief, Layer1 monitors, for example, the price of power from the grid so as to determine whether to, at least, turn on/off power and/or increase/decrease output. (*Ex. O, 5/27/2020 Tweet*) *See also claim 1, element [b1].*
[b] a plurality of parameters associated with one or more computational operations to be performed at the set of computing systems.	Layer1, upon information and belief, Layer1's control system is configured to monitor more than one parameter associated with the computational operations performed at its Bitcoin mining data centers, for example, monitoring conditions such as hash rate, price, and power is part of Layer1's arbitrage software functionality. *See claim 1, element [b1].* Additionally, Layer1 virtual power plant data centers (*i.e.*, Bitcoin mining facilities) shut down during peaks for a discounted overall $/MWh power price. (*Ex. P, 6/8/2020 Tweet*). As noted by Forbes, "[t]here's a power arbitrage opportunity as well. In the summertime when air conditioners in Dallas, Houston and Austin are going full tilt, Texas electricity prices sometimes surge to nosebleed levels. When that happens, Layer1 will be

14

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	able to make more money by shutting off its mining machines and allowing the power to flow through its substation to the grid. 'We can stabilize the grid by selling capacity for curtailment at the push of a button,' says Liegl." (*Ex. E, 2/28/2020 Forbes*). Layer1 thus must be able to determine when it is more profitable to bitcoin mine and when it is more profitable to shut down. To make such a determination, Layer1, on information and belief, monitors, for example, the price of power, and parameters (e.g. cost) associated with its computational operations.
Claim 3	
The system of claim 2,	
wherein the control system is configured to:	
determine the performance strategy for the set of computing systems based on a combination of at least the portion option data, the price of power from the grid, and the plurality of parameters associated with one or more computational operations.	Layer1's system determines a performance strategy based, at least in part, on power option data. *See claim 1, element [c1]*. Upon information and belief, Layer1's system determines a performance strategy based, at least in part, on the price of power from the grid. *See claim 2, elements [a] and [b]*. Upon information and belief, Layer1's system determines a performance strategy based, at least in part, the plurality of parameters associated with one or more computational operations. Layer1 thus must be able to determine when it is more profitable to bitcoin mine and when it is more profitable to shut down. To make such a determination, Layer1, on information and belief, monitors, for example, the price of power, and parameters (e.g. cost) associated with its computational operations. *See claim 2, elements [a] and [b]*.
Claim 6	
The system of claim 1,	*See claim 1, preamble*
wherein the control system is further configured to:	*See claim 1*

15

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
[a] receive subsequent power option data based, at least in part, on the power option agreement,	Layer1's control system is further configured to receive subsequent power option data based, at least in part, on the power option agreement. For example, upon information and belief, as a CLR (*see claim 1, element [b(2)(i)])* Layer1's system receives, as power option data, CLR base points every 5 minutes and, additionally, updated base points every 5 seconds to guide Layer1's load ramping. *See claim 1, element [b(2)(ii)]*. Additionally, upon information and belief, such base point data may be interspersed with primary frequency response data as a condition of participating as a CLR. Upon information and belief, Layer1's control system is not limited to a one-time event. Upon information and belief, Layer1's control system, therefore, is further configured to receive subsequent (*e.g.*, later in time or in operation) power option data that is based in part on the demand-response contract(s) (POA(s)).
[b] wherein the subsequent power option data specify to decrease one or more minimum power thresholds of the set of minimum power thresholds.	Upon information and belief, base point data transmitted as part of CLR power option data can specify increased or decreased base points or updated base points. *See, e.g.*, Layer1's chart of power thresholds: (*Ex. Q*, 6/17/2020 tweet).

16

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	Accordingly, upon information and belief, subsequent power option data can specify a decrease in one or more minimum power thresholds.
Claim 7	
The system of claim 6,	*See claim 6, preamble*
wherein the control system is further configured to:	*See claim 6*
[a] responsive to receiving the subsequent power option data, modify the performance strategy for the set of computing systems based on a combination of at least the portion of the subsequent power option data and at least one condition in the set of conditions	*See claim 6, elements [a] and [b], claim 1, element [c1]*
[b] wherein the modified performance strategy comprises one or more reduced power consumption targets for the set of computing systems.	Upon information and belief, Layer1 has demonstrated its system's ability to develop a performance strategy that includes power consumption targets for each interval in a varying set of minimum power thresholds (in MW) corresponding to a set of time intervals (in seconds). (*Ex. Q*, 6/17/2020 tweet). Upon information and belief, as Layer1's system receives subsequent power option data, *see claim 6, element [a]*, the system can set a reduced power consumption target for the set of computing system to meet the power threshold(s). *See claim 1, element [c3]*.

17

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
Claim 8	
The system of claim 7,	*See claim 7*
wherein the control system is further configured to:	*See claim 7*
provide instructions to the set of computing systems to perform the one or more computational operations based on the modified performance strategy.	*See claim 1[d].*
Claim 9	
The system of claim 1,	*See claim 1, preamble*
wherein the control system is a remote master control system positioned remotely from the set of computing systems.	Layer1's system includes multiple 40' x 20' containers, with each container containing computing systems. Leslie Lamb, EP 9: YOUR LAYER1 "LIEGL" COUNSEL, ANCHOR FM (2020), https://anchor.fm/cryptounstacked/episodes/EP-9-Your-Layer1-Liegl-Counsel-eeuq3f (at 10:13 min) (last visited Aug 13, 2020). It is not uncommon to locate master control systems remotely from the computer systems being controlled.
Claim 11	
The system of claim 1,	*See claim 1, preamble*
wherein the control system is configured to receive the power option data while monitoring the set of conditions.	Upon information and belief, Layer1's control system must be configured to receive the power option data while monitoring the set of conditions. According to Alex Liegl, "[s]oftware command *instantly* decreases or increases many megawatts of electricity and #bitcoin hashrate to stabilize public power grids." (*Ex. G, 6/7/2020 Tweet*). To achieve such control, there should be minimal (if any) delay between control system receiving the power option data and the control system monitoring the set of conditions.
Claim 12	
The system of claim 1,	*See claim 1, preamble*
wherein the control system is further configured to:	*See claim 1*

18

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
provide a request to a qualified scheduling entity (QSE) to determine the power option agreement;	Upon information and belief, Layer1's system engages in power arbitrage. *See claim 1, element [b(1)].* Upon information and belief, to be able to engage in arbitrage, for example in ERCOT, Layer1's system must be able to submit a load bid through a QSE in order to receive (e.g., determine) a power option agreement as an operational CLR. Upon information and belief, Layer1 has demonstrated the ability to submit load bids through a QSE. The above image tweeted by Alex Liegl, upon information and belief, is a QSE screen, and according to Alex Liegl, purports to show Layer1's system as an operational 1MW CLR. (*Ex. F*, 8/1/2020 tweet) Additionally, upon information and belief, a load resource can submits bids in ERCOT's day-ahead market and in response to SCED dispatches, which are other demand response programs. As a load resource, upon information and belief, Layer1 also employed or employs other types of

19

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
	Load Response programs which also meet this limitation. *See claim 1, elements [b(1], [b(2)(1)], and [c(3)].*
and receive power option data in response to providing the request to the QSE.	Upon information and belief, upon receiving (e.g., determining) a power option agreement, Layer1 receives power data. *See claim 1, element [b(2)(i)].*
Claim 13	
The system of claim 1, wherein the power option data specify:	*See claim 1, preamble*
[a] (i) a first minimum power threshold associated with a first time interval in the set of time intervals, and (ii) a second minimum power threshold associated with a second time interval in the set of time intervals	*See claim 1, elements [b2(i) and b2(ii)].* Layer1 states that "[v]irtual power plants instantly turn on/off and can in-/decrease output in efficient hyper-granular ***increments*** (1kW)…." (*Ex. O, 5/27/2020 Tweet*). The capability to increase or decrease in "increments" is evidence that Layer1's control system utilizes power thresholds associated with multiple time intervals.
[b] wherein the second time interval is subsequent to the first time interval.	A second timer interval is normally considered to occur subsequent to a first time interval.
Claim 14	
The system of claim 13, wherein the control system is configured to:	*See claim 13*
[a] determine the performance strategy for the set of computing systems such that the performance strategy comprises:	*See claim 1, element [c1]*
[b] a first power consumption target for the set of computing systems for the first time interval, wherein the first power consumption target is equal to or greater than the first minimum power threshold; and	*See claim 1, elements [c2 and c3] and claim 13*
[c] a second power consumption target for the set of computing systems for the second time interval, wherein the second power consumption target is equal to or greater than the second minimum power threshold.	*See claim 1, elements [c2 and c3] and claim 13*

20

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
Claim 15	
The system of claim 1,	*See claim 1, preamble*
wherein a total duration of the set of time intervals corresponds to a twenty-four hour period.	Upon information and belief, because one of the durations that ERCOT accepts for load bidding corresponds to a twenty-four hour period, at least some of Layer1's total duration of the set of time intervals correspond to a twenty-four hour period.
Claim 16	
The system of claim 1, wherein the set of conditions monitored by the control system further comprise:	*See claim 1, preamble and elements [b] and [b1]*
[a] a price of power from the power grid; and	*See claim 3.* Additionally, Layer1 states there is a power arbitrage opportunity. When electricity prices are high, Layer1 will be able to make more money by shutting off its mining machines and allowing the power to flow through its substation to the grid. (*Ex. E, 2/28/2020* Forbes). To make this determination, Layer1, upon information and belief, monitors the price of power from the power grid.
[b] a global mining hash rate and a price for a cryptocurrency; and wherein the control system is configured to:	*See element [a], above.* Upon information and belief, Layer1 must also monitor the global mining hash rate and a price for cyptocurrency (*e.g.,* Bitcoin) to make the determination whether it will make more money from bitcoin mining or from selling capacity for curtailment. Because Layer1 contends it can make these determinations (*e.g.,* whether to mine or shout off its machines) in real time (or near real time), it also monitors these set of conditions.
[c] determine the performance strategy for the set of computing systems based on a combination of at the portion of the power option data, the price of power from the power grid, the global mining hash rate and the price for the cryptocurrency,	*See, e.g., element [b] above, claim 1, element [c1], claim 3.*
[d] wherein the performance strategy specifies for at least a subset of the set of computing systems to perform mining operations for the cryptocurrency when the price	Layer1 states that its software can "instantly decrease[] or increase[] many megawatts of electricity and #bitcoin hashrate to stabilize public power grids." (*Ex. G, 6/7/2020* Tweet). Layer1's increasing the bitcoin hash rate,

21

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
of power from the power grid is equal to or less than a revenue obtained by performing the mining operations for the cryptocurrency.	on information and belief, evidences its ability to control a subset of the set of computing systems to perform mining operations. *See, also, claim 1, element [d]* (granular control of a subset of the set of computing systems.)
Claim 17	
A method comprising:	
[a] monitoring, by a computing system, a set of conditions;	*See claim 1, elements [a1] and [b1].*
[b1(i)] receiving, at the computing system, power option data based, at least in part, on a power option agreement	*See claim 1, element [b2(i)]*
[b1(ii)] wherein the power option data specify: (i) a set of minimum power thresholds, and (ii) a set of time intervals,	*See claim 1, element [b2(ii)]*
[b1(iii)] wherein each minimum power threshold in the set of minimum power thresholds is associated with a time interval in the set of time intervals;	*See claim 1, element [b2(iii)]*
[b2(i)] responsive to receiving the power option data, determining a performance strategy for a set of computing systems based on a combination of at least a portion of the power option data and at least one condition in the set of conditions,	*See claim 1, element [c1]*
[b2(ii)] wherein the performance strategy comprises a power consumption target for the set of computing systems for each time interval in the set of time intervals,	*See claim 1, element [c2]*
[b2(iii) wherein each power consumption target is equal to or greater than the minimum power threshold associated with each time interval; and	*See claim 1, element [c3]*

22

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
[c] providing instructions to the set of computing systems to perform one or more computational operations based on the performance strategy.	*See claim 1, element [d]*
Claim 18	
The method of claim 17,	
wherein determining the performance strategy for the set of computing systems comprises:	*See claim 17*
identifying information about the set of computing systems;	Layer1 identifies information about the set of computing systems. For example, Layer1 identifies, at least, the power consumption of the set of computing systems and the bitcoin hashrate of the set of computing systems. (*Ex. G*, 6/7/2020 Tweet).
and determining the performance strategy to further comprise instructions for at least a subset of the set of computing systems to operate at an increased frequency based on a combination of at least the portion of the power option data and the information about the set of computing systems.	Upon information and belief, Layer1's system uses bitcoin miners that can operate at multiple frequencies. For example, the common AntMiner S9 can operate at 550 MHz, 600 MHz, or 650 MHZ. (*Ex. S*, Antminer S9 Installation Guide, page 6). Upon information and belief, Layer1's system adjusts the operation of a subset of their computing systems to achieve granularity. Layer1 states that their "[v]irtual power plants instantly turn on/off and can in-/decrease output in efficient hyper-granular increments (1kW)...." (*Ex. O, 5/27/2020 Tweet*). Upon information and belief, Layer1 increases output, and therefore load, in hypergranular increments by operating miners at an increased frequency.
Claim 19	
The method of claim 17, further comprising	
[a1] receiving subsequent power option data based, at least in part, on the power option agreement,	*See claim 6, element [a]*
[a2] wherein the subsequent power option data specify to decrease one or more minimum power thresholds of the set of minimum power thresholds;	*See claim 6, element [b]*

23

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
[b1(i)] responsive to receiving the subsequent power option data, modifying the performance strategy for the set of computing systems based on a combination of at least the portion of the subsequent power option data and at least one condition in the set of conditions,	*See claim 7, element [a]*
[b1(ii)] wherein the modified performance strategy comprises one or more reduced power consumption targets for the set of computing systems; and	*See claim 7, element [b]*
[c] providing instructions to the set of computing systems to perform the one or more computational operations based on the modified performance strategy.	*See claim 8 and claim 1, element [d]*
Claim 20	
A non-transitory computer readable medium having stored therein instructions executable by one or more processors to cause a computing system to perform functions comprising:	Upon information and belief, Layer1's system utilizes a non-transitory computer readable medium having instructions executable by one or more processors to cause a computing system to perform multiple functions, including those set forth below.
[a] monitoring a set of conditions;	*See claim 1, elements [a1], [b], and [b1]*
[b1(i)] receiving power option data based, at least in part, on a power option agreement,	*See claim 1, element [b2(i)]*
[b1(ii) wherein the power option data specify: (i) a set of minimum power thresholds, and (ii) a set of time intervals,	*See claim 1, element [b2(ii)]*
[b1(iii)] wherein each minimum power threshold in the set of minimum power thresholds is associated with a time interval in the set of time intervals;	*See claim 1, element [b2(iii)]*
[c1] responsive to receiving the power option data, determining a performance strategy for a set of computing systems based on a combination of at least a portion of the power option data and at least one condition in the set of conditions,	*See claim 1, element [c1]*

24

Layer1 Claim Chart
U.S. Patent No. 10,608,433

Exemplary Asserted Claims	Layer1's Infringement
[c2] wherein the performance strategy comprises a power consumption target for the set of computing systems for each time interval in the set of time intervals,	*See claim 1, element [c2]*
[c3] wherein each power consumption target is equal to or greater than the minimum power threshold associated with each time interval; and	*See claim 1, element [c3]*
[d] providing instructions to the set of computing systems to perform one or more computational operations based on the performance strategy.	*See claim 1, element [d]*

25